

1 IN THE SUPERIOR COURT OF THE STATE OF CALIFORNIA
2 IN AND FOR THE CITY AND COUNTY OF SAN FRANCISCO
3

4 MILTON J. HOROWITZ and SHIRLEY HOROWITZ,
5 Plaintiff,
6 vs.
7 RAYBESTOS-MANHATTAN, INC., et al.,
8 Defendants.
9 _____/

No. 965,245

10
11
12
13
14
15 DEPOSITION OF F. D. POOLEY, Ph.D.
16 VOLUME I: Pages 1 through 104
17 Monday, July 31, 1995
18
19
20

21 Reported by: KELLY MATSON, CSR #6264
22

23 TOOKER & ANTZ
24 CERTIFIED SHORTHAND REPORTERS 131 STEUART STREET,
SUITE 201
25 SAN FRANCISCO, CALIFORNIA 94105 415/392-0650

1

1 I-N-D-E-X

2 DEPOSITION OF F. D. POOLEY, Ph.D. PAGE
3 Examination by Ms. Chaber 5
4 Afternoon Session 92
5
6

7 PLAINTIFFS' EXHIBITS (POOLEY): IDEN.

8 1 Curriculum Vitae, Page 1 6
9 2 Curriculum Vitae, Pages 2-8 6
10 3 Letter, 6-2-95, to Mr. Ohlemeyer from Dr. Pooley, with
attachments 44
11 4 Letter, 3-21-95, to Mr. Childs from
12 Dr. Longo, with attachments 103
13
14

15 ---o0o---
16
17
18
19
20
21
22
23
24
25

2

1 BE IT REMEMBERED THAT, pursuant to Notice of
2 Taking Deposition, and on Monday, July 31, 1995,
3 commencing at the hour of 10:15 a.m. thereof, at the LAW
4 OFFICES OF WARTNICK, CHABER, HAROWITZ, SMITH &
TIGERMAN,
5 101 California Street, Suite 2675, San Francisco,
6 California 94111, before me, KELLY MATSON, duly
7 authorized to administer oaths pursuant to Section
8 2093(b) of the California Code of Civil Procedure,

9 personally appeared

11 F. D. POOLEY, Ph.D.,

13 called as a witness by the plaintiffs, and the said
14 witness, being by me first duly sworn, was thereupon
15 examined and testified as is hereinafter set forth.

17 LAW OFFICES OF WARTNICK, CHABER, HAROWITZ,
18 SMITH & TIGERMAN, 101 California Street, Suite 2675, San
19 Francisco, California 94111, represented by MADELYN J.
20 CHABER, Esq., appeared as counsel on behalf of the
21 Plaintiffs.

22 LAW OFFICES OF SHOOK, HARDY & BACON, One
23 Kansas City Place, 1200 Main Street, Kansas City, MO,
24 64105, represented by WILLIAM S. OHLEMEYER, Esq., and
25 MARK J. EVANS, Esq., appeared as counsel on behalf of

3

1 the Defendant Lorillard, Inc.

2 LAW OFFICES OF NUTTER, McCLENNEN & FISH, One
3 International Place, Boston, MA, 02110, represented by
4 STEPHEN J. BRAKE, Esq., appeared as counsel on behalf of
5 the Defendant Hollingsworth & Vose Co.

6 LAW OFFICES OF KINCAID, GIANUNZIO, CAUDLE &
7 HUBERT, 200 Webster, Suite 200, Oakland, California
8 94607, represented by MATTHEW S. COLE, Esq., appeared as
9 counsel on behalf of the Defendants Kaiser Cement and
10 Kaiser Gypsum.

13 ---o0o---

4

1 F. D. POOLEY, Ph.D.,
2 being duly sworn, testified as follows:

4 EXAMINATION BY Ms. Chaber

6 Ms. Chaber: Q. Could you please state your
7 full name for the record?

8 A. Frederick David Pooley, P-o-o-l-e-y.

9 Q. And you are a Ph.D.?

10 A. Yes.

11 Q. You're not a medical doctor?

12 A. No.

13 Q. What is your --

14 A. Minerals engineering.

15 Q. What is that?

16 A. It's studies related to the characterization
17 and recovery and separation of fine mineral particles.

18 Q. Where did you take your training?

19 A. University of Wales, in Cardiff.

20 Q. What's an "NCB Student"?
21 A. At one time, the coal industry in Great
22 Britain was operated by one government-run company
23 called the National Coal Board, and I was a student
24 apprentice mining engineer with the Coal Board.
25 Q. I have been provided, from Counsel, with a CV

5

1 which consists of one page of background information and
2 eight pages of publications; is that correct?

3 A. Yes.

4 Q. Is this your current CV?

5 A. Yes. The first page is.

6 Q. Are the publications up to date?

7 A. These aren't all my publications. They're
8 only publications relating to dust and fine mineral
9 particles.

10 Q. What other things have you published?

11 A. Another area of research I'm involved in is
12 the treatment of sulfide minerals with biological
13 techniques for the recovery of gold, copper, lead and
14 zinc. I have numerous publications in that field and
15 also publications relating to the treatment of waste
16 materials, fine mineral waste materials.

17 Ms. Chaber: We'll mark the one-page CV as
18 Plaintiffs' 1 and the eight pages of publications
19 relating to dust and fine mineral particles as
20 Plaintiffs' 2.

21 (Whereupon, Plaintiffs' Exhibits 1 and 2 were
22 marked for identification.)

23 Ms. Chaber: Q. How did you get involved as
24 a witness on behalf of Lorillard and Hollingsworth &
25 Vose?

6

1 A. About two years ago I received a call, I
2 think from Mr. Ohlemeyer, asking if I would discuss and
3 review some information for him and his company.

4 Q. So approximately 1993?

5 A. I would think, yes, approximately.

6 Q. How long was that first telephone
7 conversation?

8 A. It was actually quite short, because it
9 essentially was only to arrange a visit to Cardiff to
10 have some discussions.

11 Q. What were you told in that first conversation
12 you were being asked to do?

13 A. I don't think I was asked to do anything in
14 that first conversation. I think that the initial
15 conversation was related to asbestos and the sort of
16 work I was doing, and sort of a general idea that they
17 would like to come down and talk about the work I was
18 involved in, et cetera.

19 Q. Were you told anything about the nature of
20 any lawsuits that had been involved against Lorillard or
21 Hollingsworth & Vose?

22 A. No. I became aware of one several months
23 later.

24 Q. Did you understand what product or materials
25 you were going to be discussing with these lawyers?

7

1 A. After that first meeting, yes.

2 Q. During that first -- I'm trying to go
3 step-by-step. The telephone conversation.

4 A. There was nothing of any consequence talked

5 about. It was only at the first meeting that we
6 discussed the particular materials, et cetera.
7 Q. At the time of this first contact from
8 Mr. Ohlemeyer, did he identify who he was representing?
9 A. No. I don't think I was aware of the
10 company, per se, at that time, no.
11 Q. He didn't tell you he was representing
12 Lorillard?
13 A. No.
14 Q. Did you understand that he was representing a
15 tobacco company?
16 A. Yes. I knew it related to cigarette filters,
17 yes.
18 Q. Before that conversation with Mr. Ohlemeyer,
19 did you know from any other source that any cigarette
20 filters had asbestos as a component part?
21 A. I was aware historically that some cigarettes
22 in the United States had been manufactured with asbestos
23 filters. That was purely from -- not from any
24 particular source, but information which was generally
25 available to people who were involved in researching the

8

1 asbestos field. Hearsay, I would probably call it.
2 Q. Had you read any articles by any researchers
3 relating to that?
4 A. No.
5 Q. Just something floating around somewhere that
6 you have a vague sense of?
7 A. My American colleagues, people I've worked
8 with. It's the sort of thing that comes up in
9 conversation.
10 Q. Can you give me the names of any of these
11 American colleagues?
12 A. Yes. Professor Langer in New York.
13 Dr. Nolan, Robert Nolan, in New York. Dr. Sebastian in
14 Montreal, Canada. Andrew Churg in Vancouver.
15 There were others.
16 Q. Besides some generalized sense that some
17 cigarettes were manufactured with asbestos filters in
18 the United States, did you know anything more about
19 those asbestos filters?
20 A. No.
21 Q. Were you sent any materials after this first
22 telephone conversation?
23 A. Yes. I then began to receive information by
24 Mr. Ohlemeyer relating to that particular product.
25 Q. What were you sent?

9

1 A. Some patent information which related to how
2 these filters were originally designed and manufactured.
3 Q. Let me get the list, and then I'll go back
4 and ask you questions.
5 A. There were also certain research reports from
6 various organizations, two main ones. One was by ITT, I
7 think -- IT -- from Chicago, I think.
8 Mr. Ohlemeyer: I think what the doctor is
9 referring to is the Armour Research Foundation, which
10 became at some point the Illinois Institute of
11 Technology.
12 Ms. Chaber: ITT is our phone company.
13 Q. Anything else?
14 A. And a research report by -- in which
15 Dr. Fulham was involved, and I think he had a research-

16 based organization. I'm not quite sure of the name of
17 it. Fulham & Associates, something like that.

18 Q. Anything else?

19 A. Yes. I then also received copies of some
20 research that had been conducted by an organization
21 called Materials Analytical Services.

22 That's about it.

23 Q. Was this all prior to the first physical
24 meeting?

25 A. No. This was after the first physical

10

1 meeting.

2 Q. Let me just ask you first, before I go back
3 to some of this: Do you have any file with you that
4 relates to your work with respect to what we're here
5 about?

6 A. I haven't actually done any physical report
7 work on this material. Any work I've done is to review
8 the documents, per se, and report verbally with comments
9 relating to those particular documents, et cetera, that
10 I was supplied with.

11 Mr. Ohlemeyer: The doctor has some
12 information with him that you're welcome to look at. If
13 you'd like, I can give you a description of what it is
14 he's been provided with.

15 Ms. Chaber: Let's see what he has first and
16 see if that's necessary.

17 Q. Dr. Pooley, have you in the past for any
18 other case provided a written report?

19 A. For any other case?

20 Q. Any other case related to this same topic.

21 A. No.

22 Mr. Ohlemeyer: Well, excuse me. I think the
23 question is unclear. Is the question has Professor
24 Pooley been involved in another lawsuit in which claims
25 similar to the claims being made in this lawsuit -- has

11

1 he provided a written report? I think he misunderstood
2 your question.

3 Ms. Chaber: I think it was a pretty clear
4 question.

5 Q. Have you ever provided a written report
6 relating to any other lawsuit that relates to the same
7 topic that this lawsuit does?

8 A. Asbestos filters?

9 Q. Yes.

10 A. No. Other than a short paragraph relating to
11 my observations on the MAS materials.

12 Q. Do you have a copy of that with you?

13 A. No.

14 Ms. Chaber: Can you provide that, Counsel?
15 I've asked you for any expert reports that he's written,
16 and I think I'm entitled to one that relates to
17 observations on MAS.

18 I'm sure it wasn't specific to the Chicago
19 case, and I would note that you whispered in the
20 witness's ear to refresh his memory, and obviously his
21 memory was refreshed, and I would ask for a copy of
22 that.

23 Mr. Ohlemeyer: I don't think it's much more
24 complicated than this, Ms. Chaber: Dr. Pooley has
25 prepared a written report for another case that contains

12

1 observations that are similar to those he may have in
2 this case. I will provide you with a copy, although I
3 think you already have it.

4 Ms. Chaber: I don't.

5 Mr. Ohlemeyer: I don't think we need to
6 debate whether the doctor understood or didn't
7 understand your question.

8 As he's testified, he has prepared a written
9 report that relates to his observations in another case.

10 It has nothing to do specifically with Dr. Horowitz.

11 I'll get you a copy of it.

12 Ms. Chaber: Q. Were your observations
13 specific as to the plaintiff in the Chicago case,
14 Dr. Pooley?

15 A. They were specific to the experimentation
16 that had been performed with Kent cigarettes.

17 Q. Would there be changes that you would make
18 about your observations with respect to that MAS report
19 that you reviewed that are plaintiff-specific?

20 A. I don't understand the question.

21 Q. You're sitting here being deposed in a case
22 of a gentleman, Dr. Horowitz. Can you tell me what the
23 name of the plaintiff was in the Chicago case that you
24 provided a report on?

25 A. I think it's Mr. Braun.

13

1 Q. In the Braun case, I think you just indicated
2 when you provided this report there was not information
3 that was specific as to Mr. Braun, correct?

4 A. No. It was general observations on the
5 experimentation that had been performed with cigarettes.

6 Q. Would those observations be the same as they
7 would be with respect to Dr. Horowitz?

8 A. Yes.

9 Q. So that short paragraph that you provided on
10 your observations is sort of generic; is that correct?

11 A. Yes.

12 Ms. Chaber: When can you get me that,
13 Counsel? I'd like it before the conclusion of the depo,
14 if you can have it faxed.

15 Mr. Ohlemeyer: I can give it to you now. I
16 have some scribbles. My scribbles --

17 Ms. Chaber: We'll take a break. When we
18 take a break, we'll copy that.

19 Q. The information that you were sent -- forgive
20 my American accent, but I think it's "patent"
21 information in the United States -- do you know what the
22 first year of patent information you were sent, what the
23 earliest date was?

24 A. No idea.

25 Q. How many patents were you sent?

14

1 A. I don't know. I'd be guessing.

2 Q. Do you have copies of the patents with you?

3 A. No.

4 Q. Do you have a list of the materials that have
5 been provided to you?

6 A. Back in Wales, yes.

7 Ms. Chaber: But not here?

8 Is that something that can be provided to me?

9 Mr. Ohlemeyer: I can tell you that the
10 patents that Professor Pooley reviewed are the same
11 patents that were provided to you.

12 Ms. Chaber: I've gotten things from
13 different places, two different offices, and they were
14 not identical, what I got.
15 Mr. Ohlemeyer: I'm telling you --
16 Ms. Chaber: Precisely what --
17 Mr. Ohlemeyer: You were provided four
18 patents, as I understand it. Dr. Pooley has reviewed
19 each of those patents.
20 Ms. Chaber: Q. Dr. Pooley, were you
21 provided any of the materials relating to the patent
22 application for these four patents?
23 A. The only thing I was provided was the
24 official patent document.
25 Q. And one of the people who secured patents was

15

1 Knudson?
2 A. I have no idea.
3 Q. Do you remember the name Parmele?
4 A. No.
5 Q. Did you see any information as to what the
6 people who'll sought the patents submitted to the patent
7 office in advance of being granted a patent?
8 A. No, nothing at all.
9 Q. You indicated that you received some research
10 reports from various organizations.
11 A. Yes.
12 Q. And the one that came to mind was IIT, which
13 was earlier Armour?
14 A. Yes.
15 Q. What other organizations' reports were you
16 provided?
17 A. I did mention this Dr. Fulham's organization.
18 I think he had a private research organization.
19 Q. Did you actually see a report that Dr. Fulham
20 prepared?
21 A. There was one or two letters where he had
22 commented on the technique that he had used and one or
23 two of the observations. And they were also associated
24 with that -- there were some pictures relating to what
25 he'd seen with his electron microscope?

16

1 Q. Did you actually look at the
2 photomicrographs?
3 A. Yes.
4 Q. And the actual report of Dr. Fulham has never
5 been shown to you?
6 Mr. Ohlemeyer: Object to the form of the
7 question. Assumes facts that aren't in evidence.
8 Ms. Chaber: Q. Did you discuss with
9 Lorillard what happened to Dr. Fulham's report?
10 Mr. Ohlemeyer: Same objection.
11 THE WITNESS: No.
12 Ms. Chaber: Q. Would you have wanted to see
13 his full report, rather than a couple of mentions in
14 correspondence, before forming opinions about the
15 research work he did?
16 Mr. Ohlemeyer: Same objection.
17 The objections, Doctor, are for the record,
18 to the form of the question. You can answer the
19 questions.
20 THE WITNESS: I only reviewed what I was
21 given. I'm not aware that there may be or is another
22 report available. The documents that I reviewed were

23 normally one or two pages of comment in correspondence,
24 plus observations -- examples of the observations that
25 had been made in Dr. Fulham's laboratory.

17

1 Ms. Chaber: Q. In that correspondence does
2 it not make reference to a report by Dr. Fulham?

3 Mr. Ohlemeyer: Object to the form of that
4 question.

5 THE WITNESS: I can't remember whether there
6 was a mention of a report.

7 Ms. Chaber: Q. Let's assume that there had
8 actually been a report. Okay?

9 A. Yes.

10 Q. Can you make that assumption?

11 A. Yes.

12 Q. Is that a report that you would have liked to
13 have seen before forming your opinions with respect to
14 the asbestos filter?

15 MR. BRAKE: Object that it's an unfair and
16 argumentative question.

17 THE WITNESS: Any information relating to
18 observations that have been made on these filters would
19 obviously help reinforce the comments that I would make
20 on the filters. So, yes, it would have been interesting
21 to see what was in that report, if there was one.

22 Ms. Chaber: Q. Were you provided with
23 anything else besides Armour and some correspondence and
24 observations relating to Fulham?

25 A. The MAS information.

18

1 Q. Did you see any reports or correspondence
2 relating to Althea Revere?

3 A. I've seen the name. I think it was a letter
4 that I saw specifying that -- I think this was the lady
5 who did some spectroscopic work with the materials. But
6 I didn't see any results, per se.

7 Q. When you say you received copies of research
8 work done at Materials Analytical Sciences --

9 Mr. Ohlemeyer: Services, not Sciences.

10 Ms. Chaber: Your commentary is unnecessary,
11 Counsel.

12 Q. Did you see more than one study from MAS?

13 A. Yes. I've now seen two studies.

14 Q. When did you see the second study?

15 A. Early this year.

16 Q. When you wrote your short paragraph relating
17 to your observations on MAS, were they with respect to
18 both studies?

19 A. They were pooled, yes.

20 Q. You had this telephone call from
21 Mr. Ohlemeyer and then he arranged to come to Cardiff?

22 A. Yes.

23 Q. That's in Wales?

24 A. Yes.

25 Q. When did the actual meeting take place?

19

1 A. I can't remember.

2 Q. How long after the conversation?

3 A. Within a few weeks.

4 Q. Who all came?

5 A. I think there was Mr. Ohlemeyer and
6 Mr. Hardy.

7 Q. Was Mr. Brake there?

8 A. No.
9 Q. Was Mr. Evans there?
10 A. No.
11 Q. Was Mr. McElaney?
12 A. No.
13 Ms. Chaber: Missed a trip to Wales?
14 Mr. Ohlemeyer: Sore subject.
15 Ms. Chaber: I bet.
16 Q. Was anyone else there from your organization?
17 A. During the meeting, no, not in the actual
18 meeting. But I think we did -- they would have met
19 other people in the office. It's a university
20 situation, and there were a lot of people around. But
21 there wasn't anybody from the university involved in
22 conversations relating to asbestos with them.
23 Q. Was there anyone from outside the university
24 involved in the conversations?
25 A. No.

20

1 Q. Were you meeting with these gentlemen in an
2 official capacity as part of the university?
3 A. Yes, I suppose in some ways I was, in others,
4 no. Being an academic, I do represent the university,
5 obviously, when we have visitors. But also I'm allowed
6 a certain amount of professional freedom to discuss
7 whatever subjects I like with people.
8 Q. Would you consider the work that you're doing
9 for Lorillard and Hollingsworth & Vose to be work
10 outside of your university work?
11 A. No. It's part of what we would call in Great
12 Britain "public service," in that if anybody wants
13 information and we're able to provide it, then we
14 normally do.
15 Q. And you do this for a charge, do you not?
16 A. Yes.
17 Q. Did you charge Mr. Ohlemeyer and Mr. Hardy
18 for this time you spent meeting with them?
19 A. Yes, I believe so, yes.
20 Q. What did you charge?
21 A. Maybe three, four hundred dollars at that
22 time.
23 Q. Total?
24 A. Yes.
25 Q. How long was the meeting?

21

1 A. An hour and a half, two hours.
2 Q. Was there anything set up for any subsequent
3 meetings?
4 A. No, not directly. We did meet again, but
5 there was no date set for a meeting.
6 Q. When did you meet again?
7 A. I think it was probably three or four months
8 after.
9 Q. Who was at that meeting?
10 A. Mr. Ohlemeyer, and I believe Mr. Hardy.
11 Q. Was that in Cardiff again?
12 A. I think it was, yes. Although I have met in
13 London with both gentlemen.
14 Q. When did you meet in London with
15 Mr. Ohlemeyer and Mr. Hardy?
16 A. I met in London on two occasions.
17 Q. When was that?
18 A. One was quite recently, about two months ago;

19 and towards the end of last year or the beginning of
20 this year.

21 Q. In each of those occasions was it
22 Mr. Ohlemeyer and Mr. Hardy?

23 A. Mr. Ohlemeyer was there, yes.

24 Q. And Mr. Hardy, as well?

25 A. Mr. Hardy was there once, I believe.

22

1 Q. And Mr. McElaney was not invited to these?

2 A. No.

3 Mr. Ohlemeyer: Object to the form of the
4 question. He may not have been present.

5 Ms. Chaber: Q. And Mr. Brake was not there?

6 A. No.

7 Q. What was discussed at that first meeting?

8 A. I think it was just the general review of
9 asbestos and its biological potential, and a whole range
10 of other subjects. Essentially, the sort of work that
11 I'm involved in.

12 Q. At that time, did they tell you more
13 specifically who they were representing?

14 A. I can't remember at that time being aware of
15 the name of a company.

16 Q. Did you understand at that time that they
17 were representing someone who was involved in lawsuits?

18 A. Yes, yes.

19 Q. Did you understand the nature of the business
20 of the companies they were representing?

21 A. No, I don't think I was entirely aware of the
22 nature of the business. I'm still not aware of the
23 nature of Lorillard's business.

24 Q. You're not aware that Lorillard is a tobacco
25 manufacturer and seller of cigarettes in the United

23

1 States?

2 A. I'm aware of that, but whatever else they do,
3 I'm not aware of.

4 Q. Were you aware of that at that meeting?

5 A. No, not at that time, no.

6 Q. Had you ever heard of Hollingsworth & Vose at
7 that time?

8 A. No, I don't believe I had, no.

9 Q. Are you aware of what the nature of their
10 business is at this time?

11 A. No.

12 Q. So at this meeting what did you understand
13 Mr. Ohlemeyer and Mr. Hardy were present for?

14 A. Could you repeat that?

15 Q. What did you understand was their mission,
16 Mr. Ohlemeyer and Mr. Hardy, at this first meeting?

17 A. I believe they were very interested in
18 gaining some sort of background information relating to
19 the biological potential of asbestos minerals and the
20 general field of particulates and dust-related diseases.

21 Q. What did you think they wanted to do with
22 this information?

23 A. I had no idea.

24 Mr. Ohlemeyer: Object to the form of the
25 question.

24

1 Ms. Chaber: Q. Did you think that they were
2 just generally interested, or did you think that they
3 had some motivation in their interest?

4 A. Let me put it another way: I receive calls
5 and do have visit at the university quite a few people
6 who are looking for information related to asbestos. If
7 you like, the state of the art of asbestos research.

8 We are an educational establishment, and
9 essentially the nature of the meetings tend to be ones
10 where our opinions are sought on matters relating to
11 asbestos particles.

12 Q. How many times prior to this have you had
13 meetings with lawyers?

14 A. In my office in Cardiff, maybe 20, 30 times.

15 Q. In those 20 to 30 times has it all been
16 related to asbestos particulates?

17 A. No.

18 Q. How many times related to asbestos?

19 A. Probably 90 percent of the time.

20 Q. Can you tell me who these lawyers were
21 representing who have come to see you?

22 Mr. Ohlemeyer: I want to object to that.
23 I'm not sure how relevant that is to this lawsuit.

24 Ms. Chaber: You mean to tell me I can't find
25 out what other litigation-type work that he's done and

25

1 who he's done it for?

2 Mr. Ohlemeyer: I'm not saying that. I just
3 think that I don't know enough about Dr. Pooley's
4 business and his obligations to the university to know
5 whether --

6 Ms. Chaber: That's why I'm asking him the
7 questions and not you. And he can answer those
8 questions. I don't want the information coming from you
9 anyway, Mr. Ohlemeyer.

10 Q. Can you give me an idea, Dr. Pooley, on who
11 these people were representing who have come to see you
12 in 90 percent of the 20 times that lawyers have come to
13 see you in the past?

14 Mr. Ohlemeyer: I still have an objection to
15 that question. Why don't you ask him if he's testified
16 before, or if he's --

17 Ms. Chaber: Do you have an objection that's
18 specific here?

19 Mr. Ohlemeyer: Yeah. I think you may be
20 invading the man's professional privilege or the scope
21 of his professional practice. And I just -- I don't
22 think it's necessary. There's other ways to get the
23 same information.

24 Ms. Chaber: I think my question is perfectly
25 legitimate, and I will pursue it.

26

1 Mr. Ohlemeyer: Give me a second.
2 (Discussion off the record between the
3 witness and Mr. Ohlemeyer.)

4 Ms. Chaber: Please note for the record
5 that --

6 Q. Dr. Pooley, is Mr. Ohlemeyer your lawyer?
7 Are you represented here by counsel?

8 A. No.

9 Q. You understand that as an expert witness I'm
10 entitled to go into your background and find out any
11 potential sources of bias or other things that might
12 relate to your opinions rendered in this case?

13 Do you understand that?

14 A. Yes.

15 Q. I don't intend by this to have some personal
16 invasion of your privacy. However, I believe that the
17 matters I'm inquiring about are perfectly legitimate in
18 the scope of discovery in the United States.

19 A. Yes.

20 Mr. Ohlemeyer: I object --

21 Ms. Chaber: Mr. Ohlemeyer has --

22 Mr. Ohlemeyer: I object to the statement.

23 Move to strike it. And I'd suggest that --

24 Ms. Chaber: Fine.

25 Q. Mr. Ohlemeyer was whispering in your ear that
27

1 you don't have to tell me things if you're uncomfortable
2 with that. Do you have some problem with the questions
3 I'm asking?

4 A. No, none at all.

5 Ms. Chaber: Then let's move on and have the
6 question read back.

7 Mr. Ohlemeyer: Excuse me.

8 For the record, I'm not going to debate,
9 Counsel, with you, your characterization of what I am or
10 am not doing today. I don't want the record and my
11 silence to reflect my agreement with anything.

12 Ms. Chaber: When you whisper, you ought to
13 try whispering lower, if you don't want me to hear it.

14 Q. Would you like the question read back?

15 A. No.

16 Q. I think you have it in mind.

17 A. Yes.

18 My involvement in asbestos and asbestos
19 litigation goes back probably to the early 1970s. From
20 that time on, I've met with people from industry and
21 attorneys, and discussed matters relating to asbestos
22 and other mineral particles and their biological
23 potential.

24 Q. When you say "industry," what industry are
25 you talking about?

28

1 A. Industries that utilize minerals as raw
2 materials.

3 Q. Can you give me an example of the names of
4 some of those industries?

5 A. Johnson & Johnson.

6 Q. Where do they utilize asbestos?

7 A. I said minerals.

8 Q. Okay.

9 A. They are very famous for their talcum powder,
10 and they are concerned with asbestos.

11 Q. As a contaminant of the talcum?

12 A. Yes.

13 Q. What other industries?

14 A. Government agencies. The Environmental
15 Protection Agency here in the United States. And I've
16 collaborated with them.

17 Q. On what?

18 A. On the pollution of Lake Superior by tailings
19 in the Reserve Mining case in 1970. In that particular
20 case, I became a Court's witness in the Federal Court.

21 Q. That didn't relate to asbestos, did it?

22 A. Yes. The material that was being dumped into
23 Lake Superior was classified -- was initially classified
24 by the EPA as being asbestiform.

25 Q. And then? You say "initially classified."

1 Then what happened?

2 A. It's not classified now as asbestos, but it
3 was initially classified.

4 Q. Were you representing Reserve Mining in that
5 case?

6 A. No. I initially was asked to represent both
7 sides, but I declined, and I was then employed by the
8 trial judge as a Court's witness or Court's expert.

9 Q. Who else have you -- What other industry or
10 lawyers have you discussed matters relating to asbestos
11 with?

12 A. I mentioned Johnson & Johnson. There are
13 several studies that I've been involved with with them,
14 mainly with talc.

15 Q. Are any of those published?

16 A. Yes. We have published information relating
17 to the mineral content of talcs, worldwide talcs.

18 Q. Is that on your publication list?

19 A. I can find it there.

20 There's one here. 1977, "Chemical and
21 physical properties of British talc powders," Inhaled
22 Particles & Vapors IV, Pooley and Rowlands, Proceedings
23 of BOHS Conference, September 1975.

24 Q. Besides the EPA and the Reserve Mining case
25 and the work that you've done for Johnson & Johnson,

30

1 what other industry or lawyers have you met with prior
2 to your meetings with Mr. Ohlemeyer and Hardy?

3 A. A range of local industries in Britain.

4 Q. Such as?

5 A. National Coal Board, British Gypsum, Aberthaw
6 Cement. There's a range of companies with --

7 Q. Any relating to asbestos?

8 A. Yes, several.

9 Q. Which ones?

10 A. Aberthaw Cement. British Gypsum.
11 Essentially related to the contamination of the mineral
12 products with possible asbestos materials.

13 Q. Any of the work that you've done for either
14 British Gypsum or Aberthaw Cement been published?

15 A. No.

16 Q. Have any of them resulted in your going to
17 testify before any kind of proceeding?

18 A. No.

19 Q. You said this was in the 1970s, the Reserve
20 Mining case?

21 A. Yes.

22 Q. And you did testify there?

23 A. Yes.

24 Q. Prior to your meeting with Mr. Ohlemeyer and
25 Mr. Hardy, had you ever met with any -- and outside of

31

1 the Reserve Mining case, have you met with any industry
2 or attorneys representing industry from any American
3 asbestos company?

4 A. Yes.

5 Q. Who was that?

6 A. Excuse me. When you say "asbestos company,"
7 companies who had in some way some connection with the
8 use of asbestos?

9 Q. Yes.

10 A. I think there's a company called American

11 Gypsum.
12 Q. National Gypsum?
13 A. I'm not sure. American or National Gypsum.
14 Q. Or U.S. Gypsum?
15 A. That's right.
16 Q. What did you do for them?
17 A. I actually examined some biological material
18 to establish whether or not the materials contained
19 asbestos and at what levels, and compared that with
20 control materials.
21 Q. And the types of products you were looking
22 at?
23 A. Lung tissue.
24 Q. Is this work that you did for U.S. Gypsum
25 published?

32

1 A. No.
2 Q. Did you ever testify either in a deposition
3 such as we're having today or in court?
4 A. In a deposition, yes.
5 Q. Where and when was that?
6 A. That was probably about five years ago.
7 Q. Where was it taken?
8 A. In London.
9 Q. These people are looking for free rides over
10 there.
11 Do you know where the action was pending that
12 was taken?
13 A. No, other than I think it was related to
14 Kansas City, I think. I'm not sure.
15 Q. Do you know if it was pending in a U.S. State
16 Court or a U.S. Federal Court?
17 A. No, I'm not aware of any of the legal
18 situations regarding the case.
19 Q. Do you know any of the lawyers involved?
20 A. Yes. It was a lady from south Georgia.
21 Q. That took your deposition?
22 A. No. Who represented the U.S. Gypsum.
23 I can't remember the attorney who took my
24 deposition. Sorry.
25 Q. Was it a male?

33

1 A. Yes.
2 Q. Any other U.S. concerns relating to asbestos?
3 A. Yes. I've recently examined some biological
4 material from a firm of attorneys in New Jersey.
5 Q. Do you know who they represent?
6 A. They represented Bethlehem Steel Corporation.
7 Q. Did you give a deposition or testify?
8 A. I gave a deposition and testified, yes.
9 Q. Where was it that you gave your deposition?
10 A. In Baltimore.
11 Q. Where was it that you testified?
12 A. In Baltimore.
13 Q. How many cases were you involved in?
14 A. One.
15 Q. Do you know who the plaintiff's lawyer was
16 involved in that?
17 A. I'd be guessing at the name. There's
18 normally so many names on the letterhead, and the person
19 who took my deposition, I don't think his name was on
20 the letterhead.
21 Q. Some people are more memorable than others.

22 So you have no idea?
23 A. No, I can't remember the name.
24 Q. Do you remember the name of the case?
25 A. Wilde.

34

1 Q. W-i-l-t?
2 A. W-i-l-d-e.
3 Q. When was it that you testified?
4 A. A week and a half ago.
5 Q. When were you deposed?
6 A. Two days before that.
7 Q. Any other instances where you have done work
8 on behalf of American concerns relating to asbestos?
9 A. There are others, but I'm afraid I'd have to
10 go back through my files to remember.
11 Q. How many times have you testified in court in
12 the United States?
13 A. About four times.
14 Q. One was the Reserve Mining case. The other
15 one was the one you just talked about in Baltimore?
16 A. Yes.
17 One was a Frost case.
18 Q. What's the fourth?
19 A. It was a class action case in Charleston,
20 West Virginia.
21 Q. On whose behalf were you testifying in the
22 West Virginia class action?
23 A. A company called Steel Grip, manufacturer of
24 asbestos-related clothing.
25 Q. What was the nature of your testimony on

35

1 behalf of Steel Grip?
2 A. It related to the difference in the
3 biological potential and response of asbestos minerals.
4 Q. And Steel Grip manufactured protective
5 equipment that used chrysotile asbestos?
6 A. Yes.
7 Q. And you were testifying with respect to
8 chrysotile and its less active role in certain diseases?
9 A. Its biological potential, yes.
10 Q. You would agree that of the asbestos types,
11 that crocidolite has the most biological potential of
12 the commercial types of asbestos?
13 A. Yes. The literature tends to place
14 crocidolite at the front of the queue, as it were.
15 Q. Can you give me a potency with respect to
16 amosite and chrysotile?
17 A. Can you rephrase that?
18 Q. Can you give me an idea of how much more
19 potent crocidolite is with respect to biological
20 potential for disease than either amosite or chrysotile?
21 A. I can't give you any figure, no, other than
22 to say that it does have a greater biological potential.
23 Q. With respect to the disease mesothelioma,
24 would you agree that crocidolite has the most biological
25 potential?

36

1 A. Yes.
2 Q. And would you agree that its biological
3 potential is on the order of ten times that of
4 chrysotile?
5 A. That order or even more.
6 Q. Do you even believe that chrysotile causes

7 mesothelioma?
8 A. No.
9 Q. In terms of biological potential for
10 mesothelioma relative to amosite, would you agree that
11 crocidolite is at least two times as potent?
12 A. I would agree with that figure, yes.
13 Q. Would you make it any higher?
14 A. Possibly, yes.
15 Q. How much higher?
16 A. I couldn't give you a number, but I would
17 think it is higher than that.
18 Q. Orders of magnitude higher?
19 A. Not orders. Order, maybe.
20 Q. Feel free to tell me when you need to take a
21 break. I have a tendency to run on.
22 A. Okay.
23 Mr. Ohlemeyer: In the next ten, 15 minutes?
24 Ms. Chaber: Okay.
25 Q. Can you recall any other American concerns

37

1 relating to asbestos with which you have been involved?
2 A. No. There may have been conversations with
3 other people, but I've forgotten over the last 20 years.
4 Q. This is the majority of them?
5 A. Yes.
6 Q. Was the first time you testified on behalf of
7 Lorillard and Hollingsworth & Vose the Frost case?
8 A. Yes.
9 Q. And that was here in San Francisco?
10 A. Yes.
11 Q. After this first meeting with Mr. Ohlemeyer
12 and Mr. Hardy in Cardiff, you next met with them in
13 London?
14 A. Yes. I think it was, yeah.
15 Q. You're not sure. I think you had indicated
16 three or four months later you probably met in Wales
17 again.
18 A. Yes. I can't remember the exact location.
19 Q. What happened at the next meeting?
20 A. I think it was a meeting to discuss
21 information that had been sent to me to review.
22 Q. So between the two meetings you were sent
23 information?
24 A. Yes.
25 Q. And that was the information you previously

38

1 described?
2 A. Yes. I'm not sure which order it came in.
3 It didn't come in any particular order.
4 Q. And then you had a meeting with respect to
5 that?
6 A. Yes.
7 Q. Were you asked to direct your focus in any
8 way?
9 A. No. Just to comment on the scientific and
10 technical experimental integrity of the observations
11 that had been made in the various reports and what I
12 thought of them and what they meant.
13 Q. Have you ever Dr. Longo before?
14 A. No.
15 Q. Dr. Slade?
16 A. No.
17 Q. Dr. Rigler?

18 A. No.
19 Q. What were you told about them before you were
20 provided information?
21 A. Very little, actually. Nothing. But I did
22 know of Dr. Longo, because I had been involved in a
23 study of some asbestos samples in which he was involved,
24 I believe, which was organized by Professor Langer
25 several years ago, five, six years maybe.

39

1 Q. What type of materials?
2 A. It was an exercise to compare results to
3 gauge what information can be gathered from electron
4 microscope examination of a mineral dust sample.
5 Q. Was Dr. Longo one of the people who was
6 rendering results?
7 A. I believe so. And I think it was organized
8 by Battel Northwestern in Seattle, a big research
9 organization. And I think they organized this study,
10 which I haven't seen the results of, by the way. We
11 were just sent some samples and had to comment on what
12 they contained and the mineralogical and physical
13 information. And it was organized by Professor Langer.

14 Q. So you understood that Dr. Longo was doing
15 electron microscope work?

16 A. I was aware that he was involved in that
17 field, yes.

18 Q. Other than that, did you know anything else
19 about him?

20 A. Yes. In that -- I mentioned one case that
21 I'd been involved with in south Georgia, U.S. Gypsum,
22 and I believe he was involved in that case as well,
23 because I actually saw a report that he had prepared in
24 that case. So yeah, I'd come across his name before.

25 Q. When you say you saw a report he had prepared

40

1 in that case, did you analyze his report?

2 A. Yes. I had access to the data, yes.

3 Q. And I take it you were on opposite sides of
4 the lawsuit fence in that case from Dr. Longo?

5 A. I believe so, yes.

6 Q. Prior to the time you were sent materials by
7 Lorillard and Hollingsworth & Vose lawyers related to
8 Kent cigarettes --

9 A. The only material I've been sent is from
10 Mr. Ohlemeyer.

11 Q. Do you understand that you are also here as
12 an expert for Hollingsworth & Vose?

13 MR. BRAKE: That's a litigation-related
14 matter. Dr. Pooley knows what he knows, and he's told
15 you he hasn't spoken to myself --

16 Yes, we've joined in the Lorillard case for
17 purposes of simplicity, instead of hiring our own set of
18 experts. Putting it to the doctor to confuse the
19 situation is, I think, unfair.

20 Ms. Chaber: I'm not intending to confuse the
21 doctor. I'm asking him if he understands that he is
22 here testifying not just on behalf of Lorillard, but
23 also on behalf of Hollingsworth & Vose. It's a
24 perfectly legitimate question.

25 MR. BRAKE: It's also intended to confuse.

41

1 THE WITNESS: No, I'm not aware.

2 Ms. Chaber: Q. As far as you're aware,

3 Lorillard is paying your bill?
4 A. Mr. Ohlemeyer -- I don't know who actually
5 comes up with the money, but yes.
6 Q. You know that it's not out of Mr. Ohlemeyer's
7 pocket personally; is that correct?
8 A. Yes.
9 Q. And you understand that it's his client
10 Lorillard that's paying your bills?
11 A. Yes.
12 Q. How much time have you put in on this whole
13 Kent cigarette project, total time from beginning 'til
14 today?
15 A. I would be guessing. I would put it in the
16 region of about -- reviewing documents, meetings, in the
17 order of a week to a week and a half's time.
18 That's not counting the time spent coming
19 across for the -- to give evidence in the Frost case,
20 where I was away for two or three days.
21 Q. The time that you've given me is the time
22 that it took you to actually review materials and put
23 together your opinions in this case?
24 A. Yes.
25 Q. What are you billing per hour?

42

1 A. \$170 per hour.
2 Q. Have you sent a bill to Lorillard, or have
3 you sent --
4 A. No. I've sent a bill to Mr. Ohlemeyer.
5 Q. Do you know how much you've been paid to
6 date?
7 A. I know the last two bills, one was \$900 and
8 the other one was about \$800, for the last two meetings.
9 Q. Were those the meetings that you talked about
10 in London, or otherwise?
11 A. The one I mentioned a month or so ago, and
12 then one earlier in the year.
13 Q. The one earlier in the year, was it related
14 to any specific case?
15 A. No. It was just a review of information with
16 regard to research reports, especially with relation to
17 the second research report.
18 Q. That was the topic of discussion at the last
19 meeting?
20 A. Yes.
21 Q. What was the discussion?
22 A. Essentially, a review of the figures and the
23 technique that had been employed to obtain the figures.
24 Q. That was how long a meeting?
25 A. Two hours.

43

1 Q. How long did you spend reviewing the second
2 report?
3 A. Six, seven hours in total, including meeting.
4 Ms. Chaber: Why don't we take a break? And
5 I'll show you where the copy machine is.
6 (Short recess.)
7 (Whereupon, Mr. Evans left the deposition
8 room at 11:35 a.m.)
9 (Whereupon, Plaintiffs' Exhibit 3 was marked
10 for identification.)
11 Ms. Chaber: Q. Dr. Pooley, at the break I
12 was provided a copy of the short paragraph that you had
13 described earlier relating to the work that you did in

14 the Braun, B-r-a-u-n, case.
15 You have that before you as Plaintiffs' 3; is
16 that correct?
17 A. Yes.
18 Q. I notice that there is with this a two-page
19 letter summary of your opinions. Correct?
20 A. Yes.
21 Q. And one page of the cases you've testified in
22 in the last four years as an expert witness?
23 A. Yes.
24 Q. And the listing of the cases, are these the
25 cases that you were telling me about?

44

1 A. Yes. There is one more that I'd forgotten
2 about, actually. Barnowski versus Turner & Newall.
3 Q. What was that?
4 A. That was a situation related to exposure to a
5 mixture of crocidolite and chrysotile.
6 Q. What was the type of product?
7 A. I think it was a primary asbestos plant.
8 They were making, manufacturing, a range of asbestos raw
9 materials, cloth and rope, in New Jersey, I believe.
10 Q. The plant was in New Jersey, or the case was
11 in New Jersey?
12 A. I think both.
13 Q. Do you know if it was in New Jersey State
14 Court or Federal Court?
15 A. I have no idea.
16 Q. Did you testify in court?
17 A. No. But I did testify in London on a video,
18 and I think that was used in court.
19 Q. Were you testifying on behalf of Turner &
20 Newall?
21 A. Yes.
22 Q. Have you ever testified on behalf of any
23 plaintiff in an asbestos-related case?
24 A. Yes.
25 Q. When was that and where?

45

1 A. Our laboratory in Cardiff is involved in
2 providing information to plaintiff lawyers in the United
3 Kingdom and also supplying information directly to the
4 courts relating to asbestos and asbestos-related deaths.
5 Q. Is there a procedure similar to a deposition
6 in the U.K.?
7 A. We have a Coroner's Court situation, and
8 cases come to the Coroner's Court, the cause of death to
9 be established.
10 And if it's an asbestos-related case, then we
11 would normally receive postmortem material from the
12 coroner to examine to establish whether there was or was
13 not a link with exposure to asbestos.
14 That information, together with the
15 pathologist's report, would go back to the coroner to
16 allow him to make the decision on the cause of death.
17 Q. And what is your role in that?
18 A. We provide the experienced mineralogical
19 information to the Court.
20 Q. Meaning what?
21 A. What asbestos would have been contained in
22 that individual's lungs, how much. Then that is coupled
23 with the pathology, whether or not there was fibrosis,
24 or tumor, or whatever, so that a decision can be made by

25 the Court.

46

1 Q. It is not within your expertise to opine on
2 medical causation; is that correct?

3 A. No.

4 Q. Poorly phrased, and now I have to try to fix
5 it. Is it fair to say that it is not within your
6 expertise to opine on medical causation?

7 Mr. Ohlemeyer: Can you define what you mean
8 by "medical causation"?

9 THE WITNESS: If you mean cause of death, no,
10 I'm not involved in any opinion related to cause of
11 death, i.e., Mesothelioma, et cetera.

12 Ms. Chaber: Q. Is it within your expertise
13 to determine the cause of disease?

14 A. It's within my opinion to indicate the
15 causation of disease.

16 Q. And you made a distinction between cause of
17 disease and causation of disease. What do you mean by
18 that distinction?

19 A. If you're going to link a disease to a
20 specific material, especially if it's a lung-related
21 disease, then one has to establish whether or not the
22 lung contains any of the material that you're going to
23 link it to.

24 And the whole of dust-related disease
25 research has been built up and established on that sort

47

1 of basis, that if you're a coal miner and you die from
2 industrial-related disease, we would expect to find a
3 very large amount of coal in your lungs. If you'd
4 worked in a quarry where there was a large percentage of
5 silica and you had died of silicosis, there would be a
6 large amount of silica in your lungs.

7 So what I mean by "causation" is that there
8 is a substantial amount of the material related to the
9 production of the disease, and therefore the cause of
10 death. The whole of dust-related research has been
11 built up on that, as to where the term "silicosis" comes
12 from, "asbestosis," et cetera.

13 Q. In order to be able to opine on the causation
14 of disease, you would need to know what material is
15 contained within the lungs, if it's a lung disease?

16 A. Yes.

17 Q. And in the absence of lung material, is it
18 within your expertise to opine on the causation of
19 disease?

20 A. No.

21 Q. In any of the cases related to the Kent
22 cigarettes, have you been provided with lung tissue?

23 A. No.

24 Q. How many cases now have you been involved in
25 that were related to Kent?

48

1 A. I think this is the second or the third.
2 Third.

3 Q. Frost was one?

4 A. Yes.

5 Q. Was that the first one?

6 A. Yes.

7 Q. And Braun is the one that you wrote the
8 report for?

9 A. Uh-huh (affirmative).

10 Q. That's pending in Chicago?
11 A. That's right.
12 Q. And Horowitz is the third?
13 A. Yes.
14 Q. Any others?
15 A. I think there's -- the Wright case.
16 Q. That's in court right now in San Francisco?
17 A. Yes.
18 Q. Have you come out here to testify in that
19 case, as well?
20 A. Not now, no. But I will be, I believe.
21 Q. You have been asked to come back to testify
22 in that case?
23 A. Yes.
24 Q. And you flew here for the Horowitz case for
25 this deposition today?

49

1 A. Yes.
2 Q. When did you arrive?
3 A. Yesterday evening.
4 Q. Did you have any meetings prior to the start
5 of this deposition?
6 A. Just one this morning, for half an hour.
7 Q. Who did you meet with this morning?
8 A. Mr. Ohlemeyer.
9 Q. Anyone else?
10 A. I believe Mr. Evans was in the room.
11 Q. Mr. Brake was not there?
12 A. No.
13 MR. BRAKE: Now you're getting a full sense
14 of the importance of my role.
15 Ms. Chaber: Q. And you said it was a
16 half-hour meeting?
17 A. Yes.
18 Q. And that was this morning?
19 A. Yes.
20 Q. What time?
21 A. 8:30.
22 Q. And you had just come from Wales, or were you
23 someplace else?
24 A. No. I flew in yesterday evening, and I'd had
25 a night's sleep.

50

1 Q. What was discussed at this half-hour meeting
2 this morning?
3 A. I purely asked what sort of areas I was
4 likely to be asked questions on.
5 Q. What were you told?
6 A. That it would relate to the material that I
7 had received from Mr. Ohlemeyer, and also perhaps on my
8 general background and my CV and my general interests in
9 minerals and asbestos, et cetera.
10 Q. Were you given anything case-specific? That
11 is, anything about Dr. Horowitz?
12 A. No.
13 Q. Were you told anything about Dr. Horowitz?
14 A. I only know that he lived in Beverly hills
15 and was a psychiatrist.
16 Q. Did either of those two pieces of information
17 have any relevance for you?
18 A. No.
19 Q. Do you know what the background levels of the
20 air in Beverly Hills are with respect to asbestos?

21 A. No.
22 Q. Were you provided any other case-specific
23 information relating to Dr. Horowitz or any potential
24 asbestos exposure he might have had?
25 A. Maybe a verbal comment that he may have been

51

1 exposed while he was in the Navy, I think. That's all.
2 Q. Was it Mr. Ohlemeyer who told you that?
3 A. Yes.
4 Q. Did he tell you -- He told you he was in the
5 Navy?
6 A. No, but it was something related to a passage
7 on a ship, or something like that.
8 Q. Do you have any background in determining
9 levels of asbestos in the air?

10 A. Yes.
11 Q. Do you have background and experience in
12 determining how much exposure an individual -- the
13 potential for exposure an individual might have in
14 various settings?
15 A. Only information relating to the occupational
16 groups of individuals that we've studied.
17 Q. What occupational groups have you studied?
18 A. We've studied shipyard workers, cement plant
19 workers, textile workers, friction product workers,
20 insulating workers, miners, asbestos miners.
21 And in conjunction with those studies, we've
22 studied control groups, which consist of tissues from
23 individuals not occupationally exposed to asbestos who
24 would have died from nonrelated asbestos diseases. And
25 those have been used as control or referent population

52

1 studies in the -- populations in the studies.
2 Q. Which of these occupational groups have
3 involved studies in the United States?
4 A. The textile workers in South Carolina.
5 Friction product workers, and I believe they were in a
6 Raybestos plant in Connecticut.
7 We performed controlled -- a mesothelioma
8 study and a general population control, a hundred cases
9 of mesothelioma in the United States.

10 Q. Where was that done?
11 A. That was performed in --
12 May I make reference?
13 Q. Yeah.
14 A. It was published in 1982.
15 Q. In what? You don't have them numbered.
16 A. Here, McDonald and Pooley, "Mineral fibre
17 content of lung in mesothelioma tumours in North
18 America," Proceedings of BOHS Conference, 1980, Inhaled
19 Particles V.

20 (Interruption in the proceedings.)
21 Ms. Chaber: Q. Have we gone through the
22 additional ones that were done in the United States?
23 A. I think that's the whole of the American --
24 Q. The textile plant in South Carolina, was that
25 a Raybestos plant, as well?

53

1 A. I'm not sure who it was owned by.
2 Q. It was a plant that used exclusively
3 chrysotile asbestos?
4 A. And some crocidolite, yes.
5 Q. What was the crocidolite used for?

6 A. Again, they manufactured a range of products,
7 and crocidolite was specified as one of the products.
8 Q. And the friction plant, that was a chrysotile
9 plant?
10 A. No. Chrysotile and crocidolite.
11 Q. Were they making exclusively friction
12 products at that plant?
13 A. I'm not sure of the range of products.
14 Q. Which you believe there was crocidolite used
15 in the friction products?
16 A. No. I believe it was crocidolite used in
17 specific products, but the majority of the friction
18 products were pure chrysotile.
19 Q. Were both those studies reported?
20 A. The mesothelioma study was reported. The
21 South Carolina study is reported.
22 Q. Is that also true with the McDonald's?
23 A. No.
24 Q. Who was that with?
25 A. Just myself and my research assistant, I

54

1 believe.
2 Yes. Pooley and Mitha, 1990. "Mineral fibre
3 in the lungs of workers from a British asbestos textile
4 plant." In that paper, we compared the lung contents
5 with the lung contents of a plant -- of this plant in
6 South Carolina.
7 Q. Did you actually look at lung tissue from the
8 South Carolina plant?
9 A. Yes.
10 Q. You believe in the South Carolina plant they
11 used some crocidolite?
12 A. Yes.
13 Q. Was the friction plant published?
14 A. No.
15 Q. Do you know why?
16 A. All of our studies are normally conducted in
17 conjunction with from other disciplines. For example,
18 we don't undertake any tissue studies without working in
19 conjunction with the pathologist who supplies us with
20 the tissues, so it's well-documented and characterized.
21 We also work very closely with
22 epidemiologists. A number of these studies are in
23 conjunction with epidemiologists and pathologists.
24 So the North American survey, for example,
25 the mesothelioma, that was conducted in conjunction with

55

1 Professor McDonald, who is probably the most eminent
2 epidemiologist for more work in North American than
3 anybody else.
4 Q. He's Canadian?
5 A. Yes. I include Canada in North America.
6 Q. Most people who aren't from the United States
7 do.
8 A. The friction product tissues, they were
9 examined for Professor McDonald. He subsequently
10 published information on the friction plant itself. The
11 epidemiological study. But he didn't publish anything
12 on the tissue studies.
13 Q. Are you familiar with the subsequent study to
14 the McDonald's of the friction plant done by TETA,
15 T-E-T-A?
16 A. No.

17 Q. You're not aware of a subsequent review
18 finding four cases of mesothelioma that were missed by
19 Dr. McDonald?

20 A. No.

21 Q. This mesothelioma study in the general
22 population, were there different cities that were looked
23 at for your general population control?

24 A. The mesothelioma came from a whole range of
25 locations. In the paper that was published, there's a

56

1 breakdown. So many from shipyards, so many from
2 building trades, et cetera.

3 The controls that we used in that study would
4 have been drawn from the same location, would have been
5 cases where there was no known occupational exposure to
6 asbestos, and the subject would have been of the same
7 age and sex.

8 Q. What was the source of the information that
9 there was no known occupational exposure? These were
10 people who were deceased, correct?

11 A. Yes.

12 (Interruption in the proceedings.)

13 Ms. Chaber: Let me take a break for a
14 minute.

15 (Short recess.)

16 Ms. Chaber: Q. I believe the question I had
17 asked you was how is it determined that these
18 individuals had no known occupational exposure?

19 A. Purely from their histories and -- Well, the
20 sort of work that epidemiologists do to inquire about
21 their occupations.

22 Q. These people were deceased, correct?

23 A. Yes.

24 Q. So someone else was being inquired of?

25 A. Yes.

57

1 Q. What was done to rule out significant levels
2 of asbestos in the air? By "significant," I mean
3 capable of causing disease.

4 A. I'm not quite sure --

5 Are you referring --

6 Q. In the referent population?

7 A. There is asbestos in the air, although
8 there's -- and it does vary from location to location,
9 the concentrations. And that's why the referents are
10 chosen from the same situation as the individual lived
11 and worked, as it were.

12 But the referents are chosen on the basis
13 that they haven't died from an asbestos-related disease
14 and that, therefore, the levels of asbestos in their
15 lungs are what we might term "background levels," and
16 they would then be referred to as a "normal population";
17 the sort of levels that you might find averaged in
18 everybody's lungs in the United States, for example.

19 Q. What is the average in everybody's lungs in
20 the United States?

21 A. I'd have to refer you to various
22 publications. We have our own published information.
23 I've given you the references there, the McDonald and
24 McDonald paper. You'll find a hundred cases published
25 there of referent information.

58

1 You would also find, in the other publication

2 I gave you, information relating to the background
3 population for the cases in South Carolina.

4 But if you look through the literature,
5 you'll find that there are people -- I mentioned a chap
6 called Churg, who has studied, for example, the
7 background population in California. And he's published
8 information on the levels of asbestos.

9 Q. That was Churg and Warnock?

10 A. That's right.

11 Q. When did Churg and Warnock publish that?

12 A. I think it was about 1982.

13 Q. What were the sources for asbestos in the
14 air?

15 A. There are industries all throughout the
16 United States that have generated asbestos dust.

17 There are also products that have generated
18 asbestos dust, building activities. There are thousands
19 of sources of asbestos dust which has been dispersed
20 into the air and which the general population has been
21 exposed to.

22 Q. The sources are generally the same sources
23 that people would be exposed to on an -- in an
24 occupational group, but to a greater or lesser degree?

25 A. Yes, one could say that, yes.

59

1 Q. What is retained in any individual's lungs is
2 subject to individual variability, correct?

3 A. Yes. You'll find a range of levels in
4 people's lungs, yes.

5 Q. In fact, in one study that you did, the
6 second highest level of crocidolite found in a group of
7 workers' lungs were in an individual who had the
8 shortest time exposure.

9 A. I'm not sure -- I can't remember that study.
10 If you could refer --

11 Q. I'll pull out the specifics in a few minutes.
12 That is a possible scenario, isn't it?

13 A. Oh, yes. There are often scenarios where
14 people have had a hidden exposure, let's say, to
15 materials.

16 Q. When you're looking at so-called normals, one
17 of the things you're attempting to do is learn whether
18 or not they had an occupational exposure?

19 A. No. We're normally -- the control groups,
20 we're normally trying to get an idea of what levels of
21 asbestos one will find in the general -- in the lungs of
22 the general population, because we know that there is no
23 asbestos-related disease for those levels.

24 Q. In order for that to be a valid conclusion
25 from the levels found within the controls' lungs, those

60

1 controls have to have no occupational exposure to
2 asbestos and no hidden exposure to asbestos, correct?

3 A. Yes.

4 Q. Studies of controls can be influenced by the
5 degree to which information regarding the controls'
6 backgrounds are available.

7 A. Yes.

8 Q. For example, in the Churg and Warnock study
9 done here in San Francisco, a portion of the controls
10 that were used were construction workers, correct?

11 A. I'm not sure. I think they actually chose
12 their population on the basis that they couldn't detect

13 asbestos bodies in the tissues, therefore were assumed
14 to be nonexposed to asbestos.

15 Q. Is that a fair assumption?

16 A. It's like -- It's like saying, "I'm going to
17 study the general population, but" -- and these are
18 people who haven't had occupational exposure to
19 asbestos -- "but I will leave out of the general
20 population anybody I suspect of having an exposure."

21 Which is really refining the group to one
22 which has had the least exposure, if you like.

23 Q. With respect to chrysotile asbestos,
24 chrysotile asbestos does not have the tendency to form
25 asbestos bodies, correct?

61

1 A. It does, yes.

2 Q. It does form asbestos bodies?

3 A. Yes.

4 Q. To the same degree and extent that amosite
5 does?

6 A. No.

7 Q. To the same degree and extent that
8 crocidolite does?

9 A. No.

10 Q. Isn't it true that there are far more
11 uncoated fibers of chrysotile within an individual's
12 lungs than asbestos bodies when you compare asbestos
13 bodies on amphibole cores?

14 A. Yes. Those are all like microscopic
15 observations. If you look at chrysotile fibers from
16 lung tissue, they are coated with iron, but they don't
17 form the classical asbestos bodies that you see on
18 amphibole fibers, which are very pertinent amphibole
19 fibers.

20 Q. Do you know if Churg and Warnock were looking
21 for the classical asbestos bodies formed on amphibole
22 fibers?

23 A. Yes.

24 Q. If they eliminated people from the controls
25 based on that information or the absence of finding --

62

1 of a finding of classical asbestos bodies, they might
2 not be eliminating people with significant chrysotile
3 exposure?

4 A. They might have included --

5 Q. In the construction field, the majority of
6 the products used in the United States on construction
7 sites are of chrysotile asbestos?

8 MR. COLE: Objection. Assumes facts.

9 THE WITNESS: I'm not sure. I wouldn't have
10 that information.

11 Ms. Chaber: Q. Certainly, the U.S. Gypsum
12 products you looked at, those were chrysotile?

13 A. I didn't look at any products for U.S.
14 Gypsum. I only looked at biological material supplied
15 to me by the attorney.

16 Q. So you don't have information on the various
17 products used in construction in the United States and
18 their asbestos content?

19 A. No.

20 Q. Do you have an opinion as to what the
21 background level for crocidolite is in the United
22 States?

23 A. Yes.

24 Q. What is that?
25 A. I'd have to quote a range, but it lies within

63

1 a range of approximately 50,000 fibers per gram of dried
2 lung tissue up to just short of a million fibers per
3 gram of dried lung tissue.

4 Q. Why do you have to give a range?

5 A. I'm actually trying to pull together
6 information relating to several studies, and they have
7 never all been pulled together to produce a mean value
8 for all the studies. So, for example, the Churg and
9 Warnock study, I think they quote values in the region
10 of around about 50,000 to 60,000 fibers, and some of our
11 own results --

12 Q. This is wet?

13 A. Dry.

14 Q. What's the equivalent in wet?

15 A. You divide by ten.

16 Q. So five to 6,000 per gram of wet?

17 A. Yes. In our own studies, we found a wider
18 range of values.

19 Q. Is that that same study you referred to with
20 McDonald?

21 A. Yes.

22 Q. What was the source of the crocidolite in the
23 background?

24 A. No idea.

25 Q. You understand that there are no crocidolite

64

1 outcroppings in the United States?

2 A. I am not familiar with the geology of the
3 United States.

4 Q. You would agree if there are no crocidolite
5 outcroppings in the United States, that any crocidolite
6 found as a background level would have had to come from
7 some product?

8 Mr. Ohlemeyer: Object to the form of the
9 question.

10 MR. COLE: I'll join.

11 Ms. Chaber: On what basis?

12 Mr. Ohlemeyer: I think it lacks foundation.
13 Incomplete hypothetical.

14 MR. COLE: Assumes facts.

15 Ms. Chaber: You can answer.

16 THE WITNESS: I would assume it's related to
17 the source of the crocidolite.

18 Ms. Chaber: Q. In any of those instances
19 where either you performed studies or others have
20 performed studies that you have reviewed, you have no
21 idea what the source of that crocidolite is for the
22 background levels?

23 A. I would say the source would have been South
24 Africa.

25 Q. Why do you say that?

65

1 A. Because I don't know of any other location in
2 the world where crocidolite has been mined in any
3 quantity for commercial use.

4 Q. Do you know how South African crocidolite
5 would have gotten into the lungs of North Americans?

6 A. By being imported and utilized in a range of
7 products.

8 Q. In each of the studies that we've dealt with,

9 either your own or these you have reviewed, you don't
10 know what source product provided the crocidolite for
11 background exposure?
12 A. No.
13 Q. Do you know how many of the individuals in
14 either the study that you did or the Churg and Warnock
15 study smoked cigarettes?
16 A. No.
17 Q. Do you know how many of the individuals in
18 either of those two studies smoked Kent cigarettes?
19 A. No.
20 Q. In the hundred cases, where the control group
21 was a hundred, how many cases of mesothelioma were
22 there?
23 A. The actual study was a study of a hundred
24 mesothelioma cases compared to a hundred controls.
25 Q. And the conclusion was that whatever levels

66

1 the controls had of asbestos in their lungs were not
2 sufficient to cause mesothelioma?
3 A. Yeah.
4 Q. These people all died from some other
5 disease?
6 A. I assume so.
7 Q. How is it you're able to rule out that had
8 they not died from some other disease, that in the
9 future those individuals may not have contracted
10 mesothelioma?
11 A. They obviously died of another complaint.
12 Q. Correct. So if an individual gets hit by a
13 bus and dies from the injuries caused by that bus
14 accident, we'll never know if the levels of asbestos
15 that they have in their lungs might cause mesothelioma
16 had they not gotten hit by the bus, correct?
17 A. No, we'll never know what they're likely to
18 die of.
19 Q. But the conclusion is because these
20 individuals died of something else and had asbestos
21 fibers in their lungs at some certain level, that below
22 that level people don't get mesothelioma?
23 A. Yes, people do get mesothelioma, yes.
24 Q. Do you believe that there is any threshold
25 below which no one will get mesothelioma?

67

1 A. There is increasing evidence to show that,
2 yes, there is a level below which you will not induce an
3 asbestos-related mesothelioma, yes.
4 Q. What is that level?
5 A. Approximately a million fibers per gram dried
6 lung tissue.
7 Q. Is that for all forms of asbestos?
8 A. No.
9 Q. What is that for?
10 A. It's for amphiboles.
11 Q. Do you believe that there's any level of
12 exposure to chrysotile asbestos that causes
13 mesothelioma?
14 A. No. I believe that there is no evidence to
15 show that chrysotile has induced mesothelioma in the
16 occupational situation. If it doesn't induce it in the
17 occupational population, it won't induce it in the
18 general population.
19 Q. Is it your opinion that whatever

20 mesotheliomas are found in chrysotile-exposed
21 populations are due to some amphibole contaminant of
22 that chrysotile?
23 A. Yes.
24 Q. That would be tremolite?
25 A. Yes.

68

1 Q. Is it fair to say that tremolite would be the
2 most potent carcinogen of the asbestos minerals?
3 A. Tremolite?
4 Q. Tremolite.
5 A. No.
6 Q. Do you know what percentage of tremolite
7 contamination the chrysotile mines that have been
8 studied in Canada have?
9 A. In the ore or in the dust?
10 Q. Why don't you tell me the differences?
11 A. It varies from location to location in
12 Canada, from no tremolite to approximately one percent
13 tremolite.
14 Q. That's one percent in what? The ore?
15 A. By weight, yes.
16 Q. And the other 99 percent is chrysotile?
17 A. No.
18 Q. What's the remainder?
19 A. In the ore?
20 Q. Yes.
21 A. It's a serpentine mineral.
22 Q. What is the percentage?
23 A. Normally, a good chrysotile ore body will
24 only contain about 12 percent chrysotile.
25 Q. And there have been mesotheliomas reported

69

1 among the chrysotile miners in Canada?
2 A. In certain locations, yes.
3 Q. And it's your opinion that the 12 percent
4 serpentine is not the cause of those mesotheliomas, but
5 rather the one percent by weight tremolite?
6 A. No. The 12 percent would relate to the
7 chrysotile content. Then you would have one percent
8 tremolite, and you would have 87 percent serpentine
9 rock.
10 Q. Which is inert and not carcinogenic, correct?
11 A. It hasn't been implicated in any carcinogenic
12 situations.
13 Q. So with respect to the chrysotile miners in
14 Canada who have gotten mesothelioma, it is the one
15 percent tremolite that has caused that mesothelioma, and
16 not the 12 percent chrysotile?
17 A. Partly.
18 Q. What's the other part?
19 A. Crocidolite.
20 Q. Where did the crocidolite come from?
21 A. South Africa.
22 Q. How did it get into the lungs of the miners
23 in Canada's chrysotile mines?
24 A. They manufactured gas masks with crocidolite
25 as a raw material in that vicinity during the last war.

70

1 Q. And you've done a study of the gas masks
2 manufactured in the United Kingdom?
3 A. Yes.
4 Q. Have you done a study of gas masks

5 manufactured anywhere else?
6 A. Not directly gas mask workers, but we have
7 examined gas mask workers from the Canadian mining
8 situation.
9 Q. Did you report on that in any published work?
10 A. Yes. The data has been published, but by
11 Professor McDonald.
12 Q. You were not an author of that?
13 A. No.
14 Q. The list of publications, selected list of
15 publications, that's attached to your short opinion
16 paper in the Braun is less inclusive than the list you
17 provided to me, correct?
18 A. Yes.
19 Q. And why is it that you narrowed it down to
20 these two pages?
21 A. No particular reason, other than that they
22 were the most recent publications.
23 Q. What's a paraoccupational exposure?
24 A. Paraoccupational exposure is one where an
25 individual is exposed to asbestos dust because of their

71

1 association with an individual who actually works in an
2 asbestos industry.
3 Q. So a spouse of an asbestos worker, or child?
4 A. Yes.
5 Q. Anything else that falls into
6 paraoccupational exposure?
7 A. No. That's the classical definition of the
8 paraoccupational situation.
9 Q. You indicated that you looked at a gas mask
10 factory in the U.K.?
11 A. Yes.
12 Q. Was there more than one?
13 A. Yes.
14 Q. How many?
15 A. Two.
16 Q. One was crocidolite and one was chrysotile?
17 A. Yes.
18 Q. Was this a one-time study, or has there been
19 follow-up on these people?
20 A. It's a prospective study.
21 Q. So as people die you examine the causes of
22 death?
23 A. Yes.
24 Q. And as they die you examine the mineral
25 content of their lungs?

72

1 A. Yes.
2 Q. How large were the two populations?
3 A. I don't have that information.
4 Q. Would you, if you had your paper? Is it
5 contained within the paper?
6 A. Yes.
7 Q. Do you know what percentage of the population
8 is actually being followed?
9 A. All of them.
10 Q. How do you know that?
11 A. Because we receive cases of individuals as
12 they die, and the only way that we would receive cases
13 is if there was somebody following them.
14 Q. Do you know whether or not there are
15 percentages of those populations that have been lost to

16 follow-up?
17 A. Perhaps. I don't know. I am not the
18 epidemiologist involved.
19 Q. That does happen in these kinds of studies
20 where you prospectively try to follow a group, that some
21 individuals get lost to follow-up, correct?
22 A. Perhaps. I'm not aware of it, though.
23 Q. Have there been to date any cases of
24 mesothelioma in the chrysotile-exposed group?
25 A. No.

73

1 Q. What is the percentage of mesotheliomas in
2 the crocidolite group?
3 A. Of those individuals who have died so far,
4 about 15 percent of the deaths.
5 Q. What has been the range of mineral -- Have
6 you looked at all of those deaths of mesothelioma with
7 respect to mineral content?
8 A. Yes.
9 Q. What is the lowest amount that has been
10 found?
11 A. I would be guessing, but I know it's in
12 excess of ten million fibers per gram.
13 Q. Per gram of what?
14 A. Dried tissue.
15 Q. What has been the highest found to date in a
16 mesothelioma death from the crocidolite group?
17 A. Of the gas mask workers?
18 Q. Yes.
19 A. Several hundred million.
20 Q. What process was used to make the gas mask
21 filter?
22 A. I believe it was just squeezed into pads, and
23 the pads were inserted into the gas mask.
24 Q. How?
25 A. By hand.

74

1 Q. How was it squeezed into pads?
2 A. I'm not aware of that.
3 Q. Do you know if that was a procedure done in a
4 wet state or a dry state?
5 A. I believe it was all done in a dry state.
6 Q. Do you know whether or not there was any
7 encapsulation of the fibers?
8 A. I'm not entirely familiar with the
9 construction of the filters.
10 Q. And you would agree that 15 percent of deaths
11 of a population group getting mesothelioma is a very
12 high rate of mesothelioma?
13 A. It's high, yes.
14 Q. Are you aware of any that are higher than
15 that?
16 A. Yes.
17 Q. What are you aware of that is higher than
18 that?
19 A. Deaths in Turkey from exposure to zeolite
20 fibers.
21 Q. What are the rates there?
22 This is deaths from mesothelioma?
23 A. Yes.
24 Q. What are the rates there?
25 A. In the village that was studied,

75

1 approximately 25 to 30 percent of the deaths.
2 Q. Are you familiar with any studies that looked
3 at the filter media for the Kent cigarette, the plant
4 workers involved in putting that filter media together?
5 A. No, I'm not fully conversant with the
6 workers.
7 Q. Nobody has provided you with a copy of the
8 Talcott study that looked at that plant group?
9 A. I have heard of it, but I haven't read the
10 paper myself.
11 Q. Have you read Gough and Gainsler on that same
12 plant group?
13 A. No.
14 Q. Has anybody told you what the percentage of
15 deaths due to mesothelioma in that group of workers is?
16 A. No.
17 Q. Has anybody told you what the percentage of
18 asbestos-related disease in that group of workers is?
19 A. No.
20 Q. Would you be interested in seeing the Talcott
21 study or the Gough and Gainsler study?
22 A. Yes.
23 Q. Good. We'll provide it to you before I leave
24 today.

25 In the background level that you gave me a
76

1 range of exposure to crocidolite -- I think we've talked
2 about the lowest end of the range, and those would be
3 figures coming from Churg and Warnock?
4 A. Yes.
5 Q. What other studies go into your opinion on
6 what the range of background exposure is to crocidolite?
7 A. My own studies.
8 Q. Are there specific ones? The one we talked
9 about, the hundred cases of mesothelioma?
10 A. They would be the main source of my --
11 Q. Those two?
12 A. Yes.
13 Q. I take it since you gave me a range and you
14 gave me a low number and a high number and Churg and
15 Warnock are the source for the low number, your study is
16 the source for the high number?
17 A. Yes. They also have a range, but I don't
18 have the paper with me and I'm not sure of the range.
19 Q. I want you to assume that I have come to you,
20 Dr. Pooley, for your expertise, and that I have an issue
21 as to whether or not crocidolite asbestos can escape
22 through the filter media that it's in into the smoke of
23 the cigarette that it's attached to and through that
24 mechanism into the lungs of the person smoking that
25 cigarette.

77

1 How would you go about devising a study to
2 test that proposition?
3 A. Obviously, one would require a procedure
4 which as closely as possible mimics the smoking of the
5 cigarette, or actually get somebody to smoke a
6 cigarette.
7 Q. A cigarette with crocidolite asbestos?
8 A. Yes.
9 Q. Then what would you do?
10 A. I would put a filter in the way.
11 You're concerned with establishing escape of

12 material?
13 Q. Yes.
14 A. So you could put a filter -- You could either
15 have a machine or have a human do it. All you do is put
16 a filter in to collect the material, if any, that is
17 released from the filter, and then examine that material
18 and relate it to the volume of air, et cetera, that's
19 been drawn through the cigarette.
20 Q. What kind of machine would you use?
21 A. I think they have manufactured them. I'm not
22 familiar with them, but I know they do exist.
23 Q. Has anybody asked you to do that?
24 A. No.
25 Q. Would you be able to do that if you were

78

1 asked?
2 A. If we were able to obtain a machine, yes.
3 Q. I take it these two pages in the Braun case
4 are a very short version of your opinion with respect to
5 Dr. Longo's work?
6 A. Yes.
7 Q. Tell me every criticism you have with --
8 let's start with the first study done by Dr. Longo.
9 Mr. Ohlemeyer: I think "the first study" is
10 vague. Do you mean the experiment he used with the
11 syringes?
12 Ms. Chaber: Q. Dr. Pooley, are you familiar
13 with the study that Dr. Longo published in Cancer
14 Research?
15 A. Yes, I've read the article.
16 Q. Can you tell me all of the criticisms that
17 you have of that study?
18 A. The protocol involved inserting cigarettes
19 into a syringe-type device in an effort to simulate
20 smoking, I believe, of the cigarette.
21 My first criticism there is that, obviously,
22 it's rather crude. The cigarette required some
23 manipulation, and if you're going to test a situation
24 where something is going to be released, you obviously
25 don't want to influence the material or the object to

79

1 encourage the release of particulates.
2 My next criticism would then relate to the
3 fact that obviously it was not a good simulation of the
4 smoking of a cigarette.
5 Q. Why not?
6 A. I would find it very difficult to compare
7 somebody pulling a volume of air through a syringe
8 through a cigarette and trying to compare that with a
9 smoking situation. I would assume that smoking machines
10 are designed to simulate the smoking action, and that
11 pulling a plunger out of a syringe, to me, has no
12 relationship at all to the manner in which air would be
13 drawn through a cigarette when it was smoked.
14 Q. Have you ever smoked?
15 A. Yes.
16 Q. Do you still smoke?
17 A. A cigar now and then, yes.
18 Q. Did you ever smoke cigarettes?
19 A. In the past, yes.
20 Q. What kind did you smoke?
21 A. They were British cigarettes.
22 Q. With filters or without?

23 A. Some with and some without.
24 Q. Did you ever smoke a cigarette that had
25 crocidolite asbestos in the filter?

80

1 A. I have no idea.
2 Q. Do you know of any other brand of cigarettes
3 besides Kent that used crocidolite asbestos in the
4 filter of its cigarettes?
5 A. I have no idea.
6 Q. Would you be concerned at all about smoking a
7 cigarette that had crocidolite asbestos in it?
8 A. Yes.
9 Q. Is that something you would do today if one
10 was sitting out here on the table?
11 A. No, I would not smoke it, no.
12 Q. Is that because you don't smoke, or because
13 of the crocidolite?
14 A. Both.
15 Q. When you were smoking --
16 When did you stop smoking?
17 A. Cigarettes?
18 Q. Cigarettes.
19 A. Five years ago.
20 Q. And five years ago you were already well into
21 your research work?
22 A. Yes.
23 Q. Research work regarding asbestos?
24 A. Yes.
25 Q. Would you have smoked a crocidolite filtered

81

1 cigarette before you quit?
2 A. No.
3 Q. Why not?
4 A. Because of the association that it has with
5 asbestos-related diseases.
6 Q. What association is that?
7 A. That if you inhale sufficient quantities of
8 crocidolite you are likely to induce diseases in your
9 lungs which could be of a fibrotic nature or could be of
10 a cancerous nature.
11 Q. Are you confident and convinced that Kent
12 cigarettes with the crocidolite filter do not give off
13 crocidolite asbestos into the smoke?
14 A. From the reports that I've read, I know it is
15 possible to release crocidolite from filter material.
16 Q. Do you believe that the release of that
17 crocidolite from the filter material would be sufficient
18 for an individual to inhale sufficient quantities to
19 induce disease?
20 A. There is no information in the reports that
21 I've read which indicates that the material released is
22 of a size that would be inhaled and retained in the
23 lungs.
24 Q. What size would it have to be in order to be
25 inhaled and retained?

82

1 A. The particles would have to be of a
2 reexpirable size.
3 Q. What size is that?
4 A. They would have to be individual fibrous
5 particles.
6 Q. What size?
7 A. Sizes ranging from less than one micron in

8 length up to approximately 40 microns in length, and of
9 a diameter .1 micron up to approximately a .3-micron
10 diameter.

11 Ms. Chaber: Can you read that last one back?
12 (Record read.)

13 Ms. Chaber: Q. What were the sizes of the
14 fibers released in Dr. Longo's study?

15 A. There were very few of them, actually. The
16 majority of the objects that were released -- dust
17 particles released in his studies were, in fact, bundles
18 and aggregates of fiber. He refers to them as
19 "structures."

20 Q. What were the sizes of the fibers that were
21 released?

22 A. I don't have his -- a copy of his actual
23 results to quote, but the majority of them were less
24 than five microns in length.

25 Q. Is it your opinion that fibers less than five
83

1 microns in length are implicated in causation of
2 mesothelioma?

3 A. There is very little evidence to implicate
4 fibers less than five microns in length. In fact, the
5 literature tends to indicate that fibers should be
6 larger than ten microns in length before implicating
7 them in disease.

8 Q. Are you aware of a growing body of medical
9 information that relates smaller-sized fibers, smaller
10 than five microns, with disease?

11 A. No.

12 Q. Are you familiar with Dr. Bill Nicholson?

13 A. Yes.

14 Q. How are you familiar with him?

15 A. I worked with him once.

16 Q. What did you and he do?

17 A. Examined the asbestos fiber content available
18 in dust samples in New York.

19 Q. What did you think of him?

20 A. Nice chap.

21 Q. Do you think he's competent?

22 A. I'm not sure what he does now. I think he's
23 an epidemiologist. I'm not sure what you mean by
24 "competent." I'm not sure what area you mean.

25 Q. What is his reputation in the scientific
84

1 community?

2 A. He's got quite a reputation.

3 Q. Quite a reputation good, quite a reputation
4 bad? How did you mean that?

5 A. He is one of the advocates of "Any fiber
6 will kill you."

7 Q. Do I understand correctly that you would find
8 yourself at odds with some of the opinions that
9 Dr. Nicholson has published and expressed?

10 A. Oh, yes.

11 Q. Nonetheless, do you respect those opinions?

12 A. Everybody is entitled to their opinion.

13 Q. Do you believe he is a reputable scientist?

14 A. I believe he thinks he's a reputable
15 scientist.

16 Q. I'm asking your opinion.

17 A. I think that sometimes he uses information in
18 an incorrect way.

19 (Whereupon, Mr. Brake left the deposition
20 room at 1:05 p.m.)
21 Ms. Chaber: We have about five more minutes.
22 Q. What are the other criticisms you have of
23 Dr. Longo's first study?
24 A. They relate to the subsequent treatment of
25 the material which he managed to dislodge from the

85

1 filters.

2 Q. What is your criticism of that?

3 A. That if you're going to determine what is
4 reexpirable -- Remember, you can form dust particles of
5 materials which, although they may be of a material that
6 is thought to be pathogenic, the particles themselves,
7 because of their size and size characteristics, are not
8 capable of being inhaled and getting into the lungs and
9 causing a problem.

10 So if you're going to establish whether or
11 not a material releases what I would called reexpirable
12 fibers, you then need to examine that material without
13 incurring any changes in its shape, form, composition,
14 et cetera. And the techniques that Dr. Longo used in
15 his first study to prepare the specimens were not
16 conducive to retaining the original character of the
17 material that he released.

18 Q. What was that?

19 A. He basically washed the syringe out and shook
20 it up and dispersed the particles before examining them.

21 Q. I believe you stated that one of your first
22 criticisms was the manipulation of the filter?

23 A. The filters, yes.

24 Q. When you smoked, did you ever tap your
25 cigarette before you put it in your mouth?

86

1 A. Not if it had a filter on it, no.

2 Q. You're familiar with people doing that with
3 unfiltered cigarettes, correct?

4 A. Yes.

5 Q. And you're familiar with people who have
6 switched over from unfiltered to filtered cigarettes
7 maintaining that habit of tapping the end of the
8 cigarettes that's going to go in their mouth?

9 Mr. Ohlemeyer: Object to the form of that
10 question.

11 THE WITNESS: No.

12 Ms. Chaber: Q. Have you ever seen people
13 put a cigarette behind their ear?

14 A. Yes, on odd occasions.

15 Q. And you've seen people keep cigarettes in the
16 pockets of their shirt?

17 A. Yes.

18 Q. Have you ever seen people take a pack of
19 cigarettes, open one end to allow the release of a
20 cigarette, and tap the pack to get the cigarette out?

21 A. No, I haven't seen that before, no.

22 Q. Have you ever seen people play with
23 cigarettes?

24 Mr. Ohlemeyer: Kind of vague.

25 THE WITNESS: In what sense?

87

1 Ms. Chaber: Q. Touch them, move them,
2 manipulate them, nervous-type activities.

3 A. I suppose I have, but I can't recall

4 individuals, or all the forms of the --
5 Q. And Dr. Longo, in some instances, did not --
6 in that first study that's published, did not manipulate
7 some of the cigarettes, correct?
8 A. Yes. I think there were three procedures he
9 went through: Rolling them, was it? Rolled, pinched,
10 nonmanipulated.
11 The point I tried to make to you about using
12 the equipment that he did is that the filters had to be
13 manipulated in order to insert them into the syringe.
14 Q. Any other criticisms of that first study?
15 A. Once he'd actually obtained an EM
16 preparation, electron microscope preparation, he then
17 adhered to what are considered to be standard counting
18 rules and identification rules, and I would agree that
19 he performed that.
20 Q. So the EM that he performed, he performed
21 correctly?
22 A. Yes. He had a suitable instrument.
23 Q. Have you seen all of the photographs related
24 to this first study?
25 A. Quite a few of them, yes, as copies.

88

1 Q. As photocopies, or actual --
2 A. Mainly as photocopies.
3 Q. Have you ever been shown a pack of Kent
4 cigarettes with a crocidolite filter?
5 A. No.
6 Q. Have you ever seen a cigarette of Kent
7 cigarettes that had a crocidolite filter?
8 A. I think I did.
9 Q. Where was that?
10 A. In 1950.
11 Q. 1950?
12 A. Somewhat, yes.
13 Q. Can you describe what it looked like?
14 A. No.
15 Q. Did you smoke it?
16 A. No.
17 Q. Why do you believe you've seen one?
18 A. Because I believe at that time I knew
19 somebody in Great Britain who actually had smoked some
20 Kent cigarettes.
21 Q. Why do you believe it was 1950?
22 A. Because I was at school.
23 Q. Which school would that have been?
24 A. St. Marylebone Grammar School in London.
25 Q. And you went there from 1952 to 1957?

89

1 A. Yes.
2 Q. And it would have been in one of those years?
3 A. Yes.
4 Q. Can you describe what the pack looked like?
5 A. No. I think it was gray or blue. That's
6 all.
7 Q. That's the filter?
8 A. No. The outside of the package.
9 Q. Were you, yourself, smoking in those days?
10 A. No, I hadn't started then.
11 Q. When did you start?
12 A. 1958, '59.
13 Q. And I take it you never smoked Kents?
14 A. No. They weren't available.

15 Q. Other than this time in grammar school, do
16 you recall any other time that you saw a Kent cigarette
17 with a crocidolite filter?
18 A. No, not at all.
19 Q. Do you know who this friend was?
20 A. He was a school friend, he was.
21 Q. Do you remember his name now?
22 A. George Sidney.
23 Q. You do.
24 Is Mr. Sidney still alive?
25 A. I lost contact with him a year or two later.

90

1 Ms. Chaber: We're going to stop.
2 Mr. Ohlemeyer: You want to take lunch?
3 (Discussion off the record.)
4 MR. COLE: I would request that my office be
5 provided with notice of any continuance of this
6 deposition, if it is to continue.
7 (Whereupon, a luncheon recess was taken at
8 1:20 p.m.)
9

10 ---o0o---

11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

91

1 AFTERNOON SESSION
2 MONDAY, JULY 31, 1995 3:15 P.M.
3
4 EXAMINATION BY Ms. Chaber (RESUMED)
5
6 Mr. Ohlemeyer: Note the time is 3:15.
7 Ms. Chaber: Yes. Note that I just arrived
8 back from trial call. I have not had any lunch. I
9 arrived back from the Trial Department.
10 I'm prepared to proceed forward.
11 It's my understanding this witness is getting
12 on an airplane, and leaving here at 3:30.
13 Mr. Ohlemeyer: Correct.
14 Ms. Chaber: I would not have completed under
15 any circumstances, and certainly not under these.
16 Q. Dr. Pooley, you reviewed a second testing
17 protocol that was done by Dr. Longo?
18 A. Yes.
19 Q. When did you review that?
20 A. I think it was February --
21 Sorry. It was May, April -- May.
22 Q. Of this year?
23 A. Yeah.
24 Q. That was provided to you by Mr. Ohlemeyer?
25 A. Yes.

1 Q. Did he provide you any additional information
2 besides that report?
3 A. There was a video accompanying the report.
4 Q. What was that a video of?
5 A. A video of somebody utilizing a machine, a
6 smoking machine.
7 Q. Who did you understand that to be a videotape
8 of?
9 A. There wasn't any -- There were no people in
10 it. There were pairs of hands appearing, but there was
11 no actual person, per se, involved.
12 Q. What information were you given about the
13 video?
14 A. That it was a video of the procedure that had
15 been adopted in this second report.
16 Q. Were you provided with any still photographs
17 relating to this second report?
18 A. I think there were some photocopied
19 photographs. I can't remember exactly.
20 Q. You have in front of you what you were
21 provided?
22 A. Yes. This is --
23 Q. May I see that, please?
24 A. (Witness complies.)
25 Q. There are some notations on what is marked as

1 "Page 5," but what is actually Page 3 of the actual
2 report?
3 A. Yes.
4 Q. Is that your handwriting and notations?
5 A. Yes.
6 Ms. Chaber: I'd like to have this copy
7 marked as Plaintiffs' next in order, 4.
8 Q. Can you explain to me what the handwriting
9 that you identified as yours, what it is and what it
10 means?
11 A. Just numbers, and they relate to my attempt
12 to calculate what is referred to here as "TWA Levels
13 Based on 1 Pack a Day Smoked," and my own attempts at
14 trying to obtain a figure for the concentration of
15 crocidolite structures per cc. TWA levels based on one
16 pack a day.
17 Q. You've done what with those figures?
18 A. I'm assuming that these refer to
19 concentration of structures per cc. It doesn't actually
20 say so under that heading, so I'm assuming that these
21 figures were used to produce these figures (indicating).
22 So I was attempting to see how he managed to
23 arrive at these figures.
24 Q. What did you do to determine how he arrived
25 at those figures?

1 A. A time-weighted average volume is used in
2 occupational exposure situations to calculate average
3 exposure values.
4 So when somebody talks about a TWA, they're
5 talking about a time-weighted average, because when
6 people are exposed to dust, they're not exposed to a
7 constant level of dust.
8 So what occupational hygienists do is take
9 measurements and average them out over an eight-hour
10 period, and they refer to that as a "time-weighted

11 average."
12 What Dr. Longo was doing here, I believe --
13 although I'm not sure, although TWA seems to refer to
14 that -- is to try to work out from his results he
15 obtained in this study what the time-weighted average
16 value of the concentration of crocidolite in the air
17 that the person breathed would be.

18 That's what I assumed, but it doesn't
19 actually say whether it is or not.

20 Q. Now I'm pointing to your handwriting
21 beginning at the middle of the page or the lower part of
22 the page to the left of the word "Table 1." It says,
23 "16000"; is that correct? What does that signify?

24 A. Something that I sketched down. I don't
25 remember what that "16000" refers to.

95

1 Q. What does the 7.68 million refer to? This is
2 the sixth power?

3 A. Yes.

4 Q. What does that refer to?

5 A. That refers to how much air somebody would
6 inhale in eight hours.

7 Q. What is that based on?

8 A. That's based upon a tidal volume of
9 approximately 1.8 liters and roughly 16 breaths per
10 minute. Multiply 16 breaths per minute by 1.8 liters
11 and multiply that by 60 minutes in an hour, and how
12 many --

13 Q. Do you know how much air someone inhales when
14 they're inhaling on a cigarette? Do you know how much
15 an individual inhales when they are inhaling on a
16 cigarette?

17 A. From these investigations, the machine takes
18 35 cc's of a puff. So that's 35 cc's -- you add that
19 on, or it is part of the 1.8 liters you would inhale.

20 Q. Can you explain what you just said?

21 A. You inhale a certain volume of air. So when
22 somebody puffs on a cigarette, they puff and then they
23 inhale. So the 35 cc's that they puffed, you add that
24 to the amount of air -- it is part of the amount of air
25 that they then inhale. So 35 cc's of 1.8 liters would

96

1 be the puff.

2 Q. What is this "1600:1"?

3 A. A rough ratio I was looking at.

4 Q. What is that a rough ratio of?

5 A. I don't remember.

6 Q. 240 times 20, 4800. What is the significance
7 of that? What does that relate to?

8 A. I think I was trying to work out how much --
9 That's right.

10 From the first report Dr. Longo produced, I
11 think he talked about a 30-cc puff, and I think that he
12 mentions in here that to smoke a cigarette, you take
13 eight puffs. So that figure is eight puffs multiplied
14 by 30 cc's, gives you 240 cc's. And the 20 there is 20
15 cigarettes.

16 So that figure there is my rough estimation
17 of how many cc's of puff, if you can call it that, is
18 inhaled from a pack of cigarettes.

19 Q. Now that you've figured out what that is,
20 does that help you determine what this ratio of 1600:1
21 is?

22 A. It might be the ratio of that to that
23 (indicating).
24 Q. That's going to be a wonderful record.
25 The 4800 to the 7.68 to the millionth power?

97

1 A. Would you like me to calculate it?
2 Q. What were you trying to determine by this
3 ratio?
4 A. I'm basically trying to determine from this
5 figure here --
6 Q. Which is the --
7 A. Concentration per cc. -- if the puff is 30
8 cc's while the number of structures per puff would be 30
9 times that value. So if you then were able to calculate
10 how many puffs you took, you could then multiply -- you
11 would then know how many structures -- he used that
12 term -- were in the puff, as it were.
13 And then if you knew how many cigarettes, you
14 would then know how many structures would be in the puff
15 or a pack of cigarettes.
16 If you knew the volume of air in which those
17 structures were contained and you knew how much air an
18 individual inhaled over an eight-hour period, you could
19 then calculate what the concentration of structures in
20 the puff would be in the air that an individual might be
21 exposed to.
22 Q. What would be the concentration first in the
23 puff?
24 A. The concentration in the puff, 64. He's got
25 three values. 64 is the first one, structures per cc.

98

1 That's 1,920 per puff. I think he uses 35 cc's there,
2 but I've taken 30.
3 Q. Then you would multiply that by eight?
4 A. Eight. 15,360 per cigarette.
5 Q. And if a person smoked a pack a day, you
6 would multiply that by 20?
7 A. 307,200.
8 Q. If you wanted to determine on a yearly bases,
9 you would multiply that by the number of days per year?
10 A. Yes.
11 Mr. Ohlemeyer: I think the question is --
12 you're changing the question. Are you talking about
13 total structures, or do you want him to multiply by the
14 tidal volume?
15 Ms. Chaber: I'm following along with what
16 he's telling me. I'm not changing any questions.
17 Mr. Ohlemeyer: Do you understand the
18 question, Doctor?
19 THE WITNESS: No, not really.
20 Ms. Chaber: Q. You were giving me the
21 concentration per puff?
22 A. Yes.
23 Q. And then you're calculating it out per the
24 number of puffs in a cigarette?
25 A. Yes.

99

1 Q. And then the per-cigarette concentration?
2 A. Yes.
3 Q. Multiplied by the number in a pack a day?
4 A. Yes.
5 Q. And if you wanted to determine the
6 concentration over a year time period, you would

7 multiply that by --
8 A. No. You would have to calculate the
9 concentration over the eight-hour period, first of all.
10 Because you're supposedly smoking this pack in an
11 eight-hour period.
12 Q. Do you think that time weighted averages
13 apply to a situation where someone is inhaling a
14 substance directly into their mouth, as opposed to
15 encountering it in a work atmosphere in the air?
16 A. No. I mean, these are structures. These are
17 not fibers. So we don't know whether these particles
18 are respirable or not. So we're just assuming that
19 these structures are there in the smoke, but whether
20 they get into the lungs or not is another matter.
21 Q. Do you have an opinion on that?
22 A. Yes.
23 Q. And that opinion is?
24 A. They've got to conform to specific size and
25 shape.

100

1 Q. What size and shape?
2 A. If you look up classical dust theory,
3 particles theoretically should have an aerodynamic
4 diameter which is less than .7 microns.
5 Q. Did any of these structures fit that
6 aerodynamic diameter?
7 A. Well, you've got to determine the aerodynamic
8 diameter. It wasn't determined in these particles.
9 Q. Is this something you would be capable of
10 doing?
11 A. Oh, yes. There are instruments for that.
12 Q. How would you determine it?
13 A. It's a machine called an aerosol
14 spectrometer.
15 Mr. Ohlemeyer: I think the question is
16 unclear. When you say that you could do it, do you mean
17 you could today, with this data, or do you mean you
18 could do it in general?
19 Ms. Chaber: Q. Could you do it in general?
20 A. If I had a sample of airborne dust, yes.
21 Q. If Lorillard had come to you and asked you to
22 perform a test, you would have been able to do that?
23 A. Yes, you can determine aerodynamic diameters
24 of particles, yes.
25 Mr. Ohlemeyer: Although the objection is

101

1 late, I object to the form of the question. Incomplete
2 hypothetical.
3 There are a lot of facts you would have to
4 assume before you could answer a question like that.
5 Wrap it up and we've got to go.
6 Ms. Chaber: Why don't you tell me what your
7 outside deadline is? If it's not 3:30, I'll keep going.
8 Mr. Ohlemeyer: It is. There's a car waiting
9 for him. He has to go to the airport.
10 Ms. Chaber: I would state for the record
11 that this deposition is not completed; that the reasons
12 it's not completed were beyond my control but, rather,
13 related to the court calling us down for this case to go
14 to trial.
15 I would request a continuation of
16 Dr. Pooley's deposition in advance of his testimony in
17 trial in sufficient amount of time to get a transcript,

18 which would be no shorter than 48 hours.
19 MR. COLE: In addition, I'd like to request
20 on behalf of my client that we be given reasonable
21 notice of any continuation of Dr. Pooley's deposition
22 and the ability to participate in same.
23 Ms. Chaber: So noted.
24 THE REPORTER: Would you like a copy of the
25 transcript?

102

1 Mr. Ohlemeyer: Yes. I'd like a transcript,
2 ASCII disk and Minuscript.
3 MR. COLE: I'll have to call you.
4 (Whereupon, Plaintiffs' Exhibit 4 was marked
5 for identification.)
6 (Whereupon, the deposition of F. D. POOLEY,
7 Ph.D., was adjourned at 3:35 p.m.)
8
9
10
11

F. D. POOLEY, Ph.D.

12
13
14
15
16
17
18
19
20
21
22
23
24
25

103